



73607

SEQUENCE LISTING

<110> MASLE, JOSETTE

FARQUHAR, GRAHAM DOUGLAS

GILMORE, SCOTT ROBERT

<120> METHOD OF PRODUCING PLANTS HAVING ENHANCED TRANSPIRATION EFFICIENCY AND PLANTS PRODUCED THEREFROM

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<150> 10/519,135

<151> 2003-07-02

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<170> PatentIn version 3.2

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Page 9

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<213> Arabidopsis thaliana ERECTA homolog

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Asp Trp Asp Asp Val His Asn Ser Asp Leu Cys Ser Trp Arg Gly Val
50 55 60

Phe Cys Asp Asn Val Ser Tyr Ser Val Val Ser Leu Asn Leu Ser Ser
65 70 75 80

Leu Asn Leu Gly Gly Glu Ile Ser Pro Ala Ile Gly Asp Leu Arg Asn
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Leu Gln Ser Ile Asp Leu Gln Gly Asn Lys Leu Ala Gly Gln Ile Pro
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115 120 125

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Ser Asp Met Cys Gln Leu Thr Gly Leu Trp Tyr Phe Asp Val Arg Gly
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225 230 235 240

Phe Gln Ile Leu Asp Ile Ser Tyr Asn Gln Ile Thr Gly Glu Ile Pro
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Tyr Asn Ile Gly Phe Leu Gln Val Ala Thr Leu Ser Leu Gln Gly Asn
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Arg Leu Thr Gly Arg Ile Pro Glu Val Ile Gly Leu Met Gln Ala Leu
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Ile Leu Gly Asn Leu Ser Phe Thr Gly Lys Leu Tyr Leu His Gly Asn
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Ser Tyr Leu Gln Leu Asn Asp Asn Lys Leu Val Gly Thr Ile Pro Pro
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Glu Leu Gly Lys Leu Glu Gln Leu Phe Glu Leu Asn Leu Ala Asn Asn
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Asp Lys Leu Asp Leu Ser Gly Asn Asn Phe Ser Gly Ser Ile Pro Leu
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Thr Leu Gly Asp Leu Glu His Leu Leu Ile Leu Asn Leu Ser Arg Asn
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Gln Met Ile Asp Val Ser Phe Asn Leu Leu Ser Gly Val Ile Pro Thr
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Glu Leu Gly Gln Leu Gln Asn Leu Asn Ser Leu Ile Leu Asn Asn Asn
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Lys Leu His Gly Lys Ile Pro Asp Gln Leu Thr Asn Cys Phe Thr Leu
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Val Asn Leu Asn Val Ser Phe Asn Asn Leu Ser Gly Ile Val Pro Pro
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Met Lys Asn Phe Ser Arg Phe Ala Pro Ala Ser Phe Val Gly Asn Pro
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Tyr Leu Cys Gly Asn Trp Val Gly Ser Ile Cys Gly Pro Leu Pro Lys
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Ser Arg Val Phe Ser Arg Gly Ala Leu Ile Cys Ile Val Leu Gly Val
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Ile Thr Leu Leu Cys Met Ile Phe Leu Ala Val Tyr Lys Ser Met Gln
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Gln Lys Lys Ile Leu Gln Gly Ser Ser Lys Gln Ala Glu Gly Leu Thr
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Phe Glu Ala His Leu Ser Asp Phe Gly Ile Ala Lys Ser Ile Pro Ala
785 790 795 800

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820 825 830

Tyr Ser Phe Gly Ile Val Leu Leu Glu Leu Leu Thr Gly Lys Lys Ala
835 840 845

Val Asp Asn Glu Ala Asn Leu His Gln Leu Ile Leu Ser Lys Ala Asp
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Asp Asn Thr Val Met Glu Ala Val Asp Pro Glu Val Thr Val Thr Cys
865 870 875 880

Met Asp Leu Gly His Ile Arg Lys Thr Phe Gln Leu Ala Leu Leu Cys
885 890 895

Thr Lys Arg Asn Pro Leu Glu Arg Pro Thr Met Leu Glu Val Ser Arg
900 905 910

Val Leu Leu Ser Leu Val Pro Ser Leu Gln Val Ala Lys Lys Leu Pro
915 920 925

Ser Leu Asp His Ser Thr Lys Lys Leu Gln Gln Glu Asn Glu Val Arg
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agttctgaaa cttgagaagc atccaagtaa ttgatttata caacaacgcc atgtctgggt	180
atctccctga agaactacgc caacttcaga atcttgatag tttgatgctt aacaacaata	240
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Lys Gly His Ile Pro Ser Glu Leu Gly His Ile Ile Asn Leu Asp Thr
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Leu Asp Leu Ser Tyr Asn Glu Leu Ser Gly Pro Val Pro Ala Thr Ile
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Gly Asp Leu Glu His Leu Leu Gln Leu Asn Leu Ser Lys Asn His Leu
 65 70 75 80

Ser Gly Ser Val Pro Ala Glu Phe Gly Asn Leu Arg Ser Ile Gln Val
 85 90 95

Ile Asp Leu Ser Asn Asn Ala Met Ser Gly Tyr Leu Pro Glu Glu Leu
 Page 31

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Ala Gln Gly Leu Ala Tyr Leu His His Asp Cys Asn Pro Arg Ile Val
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His Arg Asp Val Lys Ser Ser Asn Ile Leu Leu Asp Glu His Phe Glu
385 390 395 400

Ala His Leu Ser Asp Phe Gly Ile Ala Lys Cys Val Pro Ala Ala Lys
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cccgacgtgg gagacacctg caaggacctg ggcgaggtga agaagctgtt ccagctggcg 1020
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gctgttcctc aag 1273

<210> 22
 <211> 100
 <212> DNA
 <213> partial maize ERECTA

<400> 22
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 acgtctacgt cttccccctac accatgttct gcgagatggc 100

<210> 23
 <211> 599
 <212> DNA
 <213> partial maize ERECTA

<220>
 <221> misc_feature
 <222> (529)..(529)
 <223> not determined

<400> 23
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 cgtcccacaa aatgtcagtc aaactactcc ctgcaatcgg cctcactcaa ggcgcctcac 180
 cgaacgtcta cgtcttcccc tacaccatgt tctgcgagat ggcctcgccg aacttgagga 240
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 caaggacgcg caccacctcg tgcacgtcg gccgggtccga gggctgccgc ttggtgcaga 480
 ggagcgccag ctggaacagc ttcttcacct cgcccaggct cttgcaggng tctccacgt 540
 cggggtccac cgtctccatg acctcgttgc tcgccgtctt cgataggatc aaggatgga 599

<210> 24
 <211> 436
 <212> DNA
 <213> partial maize ERECTA

<400> 24
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 aatgtcagcc aaactactcc ctgcaatcgg cctcactcaa ggcgcctcac cgaacgtcta 180
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 ctcgtcgacg taggccggcg gggacggctg cggcggcagc tgggtggtgcg cgtgcgctt 360
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caccacctcg ggcatac

436

<210> 25
 <211> 509
 <212> DNA
 <213> partial maize ERECTA

<400> 25
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 ggtggtgcgc gtgctccttc tgctgctgct gctgcggctg cggcggcggc tccgggttca 420
 ccaggcagtc aaggacgcgc accacctcgt gcatcgtcgg ccggtccgag ggctgcccgt 480
 tgggtgcagag gagcgccagc tggaacagc 509

<210> 26
 <211> 318
 <212> DNA
 <213> partial maize ERECTA

<400> 26
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 accctagcta ctgagtccca tgtaaatctc ctgcgctgcg tcccacaaaa tgcagtcaa 180
 actactcccc ctgcaatcgg cctcactcaa ggcgcctcac cgaacgtcta cgtcttcccc 240
 tacaccatgt tctgcgagat ggcctcgccg aacttgagga acagctcggc gtccgaggtg 300
 ctggacgagt tggcgcag 318

<210> 27
 <211> 103
 <212> DNA
 <213> partial maize ERECTA

<400> 27
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 catgtctttg atgatataat gaggatgact gagaacttga gtg 103

<210> 28
 <211> 458
 <212> DNA
 <213> partial maize ERECTA

<400> 28
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73607

cttacagact tcggcatcgc taagagctta tgtgtctcga agactcacac gtcaacctac	120
gtcatgggca ctattggtac acttgatcct gagtacgccc gcacctcccg cctcaacgag	180
aagtctgatg tctacagcta cggcatcggt ctgctggagc tgctgaccgg caagaagcca	240
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catggagacg gtggaccccg acgtgggaga cacctgcaag gacctgggag aggtgaagaa	360
gctgttccag ctggcgctcc tctgcaccaa gcggcagccc tcggaccggc cgacgatgca	420
cgagggtggtg cgcgtccttg actgcctggt gaaccg	458

<210> 29
 <211> 593
 <212> DNA
 <213> partial maize ERECTA

<400> 29 tttttttttt tttttttttt ttttttgagg aagaagctcc gctgctcttg cgttgcgta	60
catgactttt tacagctaac aacaccctag ctactgagtc ccatgttaat ctctgagct	120
gcgtcccaca aaatgtcagt caaactactc cctgcaatcg gcctcathtt tttgttgctc	180
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cgcaggctga cgtactcgtc gacgtaggcc ggcgcgacg gctgcggcgg cagctggtgg	360
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cagtcaagga cgcgcaccac ctctgcatc gtcggccggt ccgagggctg ccgcttggtg	480
cagaggagcg ccagctggaa cagcttcttc acctcgccca ggtccttgca ggtgtctccc	540
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<210> 30
 <211> 206
 <212> DNA
 <213> partial maize ERECTA

<400> 30 tcacaaaaga tcatcaagca gaggaacggg agagatgatg atggatcaat acagcctcct	60
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tgctcttgag tcacatgact ttttttacag ctaacaacac cctagctact ggtcccatg	180
ttaatctcct gcgctgcgtc ccacaa	206

<210> 31
 <211> 534
 <212> DNA
 <213> partial maize ERECTA

<400> 31 caagcagagg aacgggagag atgatgatgg atcaatacag cctcctagta agttagacca	60
caaagaaaaa tggggagggg ggataaagaa gaggaagaag ctccgctgct cttgcgtcac	120

73607

atgacttttt	ttacagctaa	caacacccta	gctactgagt	cccatgttaa	tctcctgcgc	180
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tcaccgaacg	tctacgtctt	cccctacacc	atgttctgcg	agatggcctc	gccgaacttg	300
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cgcaggctga	cgtactcgtc	gacgtaggcc	ggcggcgacg	gctgcggcgg	cagctggtgg	420
tgcgcgtgcg	gcttctgctg	ctgctgctgc	ggctgcggcg	gcggctccgg	gttcaccagg	480
cagtcaagga	cgcgcaccac	ctcgtgcatc	gtcggccggt	ccgagggtg	ccgc	534

<210> 32

<211> 527

<212> DNA

<213> partial maize ERECTA

<400> 32

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gctccgctgc	tcttgcggtg	cgtcacatga	ctttttacag	ctaacaacac	cctagctact	180
gagtcccatg	ttaatctcct	gcgctgcgtc	ccacaaaatg	tcagtcaaac	tactccctgc	240
aatcggcctc	actcaaggcg	cctcaccgaa	cgtctacgtc	ttcccctaca	ccatgttctg	300
cgagatggcc	tcgccgaact	tgaggaacag	ctcggcgtcc	gaggtgctgg	acgagttggc	360
gcaggaaagg	gcgccggtgc	cccgcaggct	gacgtactcg	tcgacgtagg	ccggcggcga	420
cggctgcggc	ggcagctggt	gggtgcgcgtg	cgctttctgc	tgctgctgct	gcggctgcgg	480
cggcggctcc	gggttcacca	ggcagtcaag	gacgcgcacc	acctcgt		527

<210> 33

<211> 412

<212> DNA

<213> partial maize ERECTA

<400> 33

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taatctcctg	cgctgcgtcc	cacaaaatgt	cagtcaaact	actccctgca	atcggcctca	120
ctcagggggc	ctcaccgaac	gtctacgtct	tcccctacac	caggttctgc	gagatggcct	180
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cgccggggcc	ccgcaggctg	acgtactcgt	cgacgtaggc	cggcggcgac	ggctgcggcg	300
gcagctgggg	gtgcgcgtgc	gccttctgct	gctgctgctg	cggttgcggc	ggcggctccg	360
ggttcaccag	gcagtcaagg	acgcgcacca	cctcgggcat	cgtcggcccg	tc	412

<210> 34

<211> 533

<212> DNA

<213> partial maize ERECTA

<400> 34

73607

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cgttgcgta catgactttt tacagctaac aacaccctag ctactgagtc ccatgttaat	180
ctcctgcgct gcgtcccaca aaatgtcagt caaactactc cctgcaatcg gcctcactca	240
aggcgctca ccgaacgtct acgtcttccc ctacaccatg ttctgcgaga tggcctcgcc	300
gaacttgagg aacagctcgg cgtccgaggt gctggacgag ttggcgagg agagggcgcc	360
ggtgccccgc aggctgacgt actcgtcgac gtaggccggc ggcgacggct gcggcggcag	420
ctggtggtgc gcgtgcgct tctgctgctg ctgctgcggc tgcggcggcg gctccgggtt	480
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<210> 35
 <211> 191
 <212> DNA
 <213> partial maize ERECTA

<400> 35 agcctcctag taagttagac caccaaagaa aaatggagag gggggataaa gaagatgagg	60
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gctactgagt cccatggtaa tctcctgctg tgcgtccac aaaatgtcag tcaaactact	180
ccctgcaatc g	191

<210> 36
 <211> 683
 <212> DNA
 <213> partial maize ERECTA

<400> 36 gacgttgga acctcctctt ttatgcttta tggagagtgg cagcttatgg gatgttttac	60
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gtgcagctca aggcctcgct taccttcacc atgactgcag cccacgaata attcaccggg	180
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cgacgcgca ccaccagctg ccg	683

<210> 37
 <211> 610

<212> DNA
 <213> partial maize ERECTA

<400> 37
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 tgtctacagc tacggcatcg ttctgctgga gctgctgacc ggcaagaagc cagtggacaa 180
 cgagtgcaat ctccatcact tgatcctatc gaagacggcg agcaacgagg tcatggagac 240
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 gaaggcgac gcgcaccacc agctgccgcc gcagccgctc ccgccggcct acgtcgacga 480
 gtacgtcagc ctgcggggca ccggcgccct ctctgcgcc aactcgtcca gcacctcgga 540
 cgccgagctg ttctcaagt tcggcgaggc catctcgag aacatgggtgt aggggaagac 600
 gtagacgttc 610

<210> 38
 <211> 208
 <212> DNA
 <213> partial maize ERECTA

<220>
 <221> misc_feature
 <222> (138)..(138)
 <223> not determined

<400> 38
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 cggggcatca agtactgntt ataatgtgt tctaaagaat tgcaaaccag tggcaataaa 180
 aaagctgtat gccactacc ctgagagc 208

<210> 39
 <211> 634
 <212> DNA
 <213> partial maize ERECTA

<400> 39
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73607

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gagtacgtca gcctgcgggg caccggcgcc ctctcctgcg ccaactcgtc cagcacctcg	600
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<210> 40
 <211> 558
 <212> DNA
 <213> partial maize ERECTA

<400> 40 acttgatgcc ccgtatccaa tgatgtattt ctactcaag ttctcagtca tcctcattat	60
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gttcatcaga gaagagacat cgccagttat attgttgttt tccagtttta gcaacatcag	480
gttttgacgc attccaagtt cttgaggaat cagaccacca agatgattat aggataaatc	540
aatctccatg acacttct	558

<210> 41
 <211> 429
 <212> DNA
 <213> partial maize ERECTA

<400> 41 tacttgatgc cccgtatcca atgatgtatt tctactcaa gttctcagtc atcctcatta	60
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<210> 42
 <211> 556
 <212> DNA
 <213> partial maize ERECTA

<400> 42 acatgcaagt caacagggtta actggatcga taccaccaga gctaggaaat atgtcaacac	60
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<210> 43
 <211> 683
 <212> DNA
 <213> partial maize ERECTA

<400> 43						
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<210> 44
 <211> 2315
 <212> DNA
 <213> maize ERECTA

<400> 44						
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Leu Ala Asn Asn His Leu Glu Gly Pro Ile Pro Asp Asn Leu Ser Ser
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Cys Val Asn Leu Asn Ser Phe Asn Ala Tyr Gly Asn Lys Leu Asn Gly
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Thr Ile Pro Arg Ser Leu Arg Lys Leu Glu Ser Met Thr Tyr Leu Asn
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Val Pro Thr Asp Asn Asn Phe Thr Arg Phe Ser His Asp Ser Phe Leu
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Thr Gly His Arg Asp Lys Pro Pro Ile Ser Lys Ala Ala Ile Ile Gly
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Pro Val Gly Asn Leu Leu Phe Tyr Ala Tyr Met Glu Ser Gly Ser Leu
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Val Met Gly Thr Ile Gly Tyr Ile Asp Pro Glu Tyr Ala Arg Thr Ser
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Arg Leu Asn Glu Lys Ser Asp Val Tyr Ser Tyr Gly Ile Val Leu Leu
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